

I Claim:

1. A method of inducing apoptosis in cancer cells by administering alpha 1-acid glycoprotein to said cancer cells.
2. The method of claim 1 wherein said alpha 1-acid glycoprotein has been charged with zinc.
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3. A method of inducing apoptosis in cancer cells by administering alpha 2-HS glycoprotein to said cancer cells.
4. The method of claim 3 wherein said alpha 2-HS glycoprotein has been charged with zinc.
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5. A method of inducing apoptosis in cancer cells by administering alpha 1-antitrypsin to said cancer cells.
6. The method of claim 5 wherein said alpha 1-antitrypsin has been charged with zinc.
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7. A method of inducing apoptosis in cancer cells by administering a peptide fragment of alpha 1-acid glycoprotein to said cancer cells.
8. The method of claim 7 wherein said peptide fragment of alpha 1-acid glycoprotein has been charged with zinc.
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9. A method of inducing apoptosis in cancer cells by administering a peptide fragment of alpha 2-HS glycoprotein to said cancer cells.
10. The method of claim 9 wherein said peptide fragment of alpha 2-HS glycoprotein has been charged with zinc.
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11. A process for preparing zinc charged alpha 1-acid glycoprotein which is suitable for treatment on cancer cells comprising:
- a. incubating said alpha 1-acid glycoprotein in solution with a chelating agent;
 - b. isolating naked alpha 1-acid glycoprotein from step a;
 - c. incubating said naked alpha 1-acid glycoprotein in solution with Zinc Acetate; and
 - d. isolating zinc charged alpha 1-acid glycoprotein from the solution in step c.
12. A process for preparing zinc charged alpha 2-HS glycoprotein, which is suitable for treatment on cancer cells comprising:
- a. incubating said alpha 2-HS glycoprotein in solution with a chelating agent;
 - b. isolating naked alpha 2-HS glycoprotein from step a;
 - c. incubating said naked alpha 2-HS glycoprotein in solution with Zinc Acetate; and
 - d. isolating zinc charged alpha 2-HS glycoprotein from the solution in step c.
13. A process for preparing zinc charged alpha 1-antitrypsin, which is suitable for treatment on cancer cells comprising:
- a. incubating said alpha 1-antitrypsin in solution with a chelating agent;
 - b. isolating naked alpha 1-antitrypsin from step a;
 - c. incubating said naked alpha 1-antitrypsin in solution with Zinc Acetate; and

d. isolating zinc charged alpha 1-antitrypsin from the solution in step c.

14. A method of preparing a peptide fragment having apoptotic activity isolated from alpha 1-acid glycoprotein comprising the
5 following steps:

- a. incubating said alpha 1-acid glycoprotein in solution with a chelating agent;
- b. isolating naked alpha 1-acid glycoprotein from step (a);
- c. incubating said naked alpha 1-acid glycoprotein in
10 solution with zinc;
- d. isolating zinc charged alpha 1-acid glycoprotein from the solution created in step (c);
- e. drying said zinc charged alpha 1-acid glycoprotein from
step (d);
- f. isolating, from step (e), peptide fragments which have
15 apoptotic activity in cancer cells.

15. A method of preparing a peptide fragment having apoptotic activity isolated from alpha 2-HS glycoprotein comprising the following steps:

- 20 a. incubating said alpha 2-HS glycoprotein in solution with a chelating agent;
- b. isolating naked alpha 2-HS glycoprotein from step (a);
- c. incubating said naked alpha 2-HS glycoprotein in solution with zinc;
- 25 d. isolating zinc charged alpha 2-HS glycoprotein from the solution created in step (c);

e. drying said zinc charged alpha 2-HS glycoprotein from step (d);

f. isolating, from step (e), peptide fragments which have apoptotic activity in cancer cells.

5 16. A method of preparing a peptide fragment having apoptotic activity isolated from alpha 1-acid glycoprotein comprising the following steps:

a. incubating said alpha 1-acid glycoprotein in solution with a chelating agent;

10 b. isolating naked alpha 1-acid glycoprotein from step (a);

c. incubating said naked alpha 1-acid glycoprotein in solution with zinc;

d. isolating zinc charged alpha 1-acid glycoprotein from the solution created in step (c);

15 e. incubating the zinc charged alpha 1-acid glycoprotein from step (d) with papain;

f. isolating, from step (e), peptide fragments which have apoptotic activity in cancer cells.

17. A method of preparing a peptide fragment having apoptotic activity isolated from alpha 2-HS glycoprotein comprising the following steps:

a. incubating said alpha 2-HS glycoprotein in solution with a chelating agent;

b. isolating naked alpha 2-HS glycoprotein from step (a);

25 c. incubating said naked alpha 2-HS glycoprotein in solution with zinc;

- d. isolating zinc charged alpha 2-HS glycoprotein from the solution created in step (c);
- e. incubating the zinc charged alpha 2-HS glycoprotein from step (d) with papain;
- 5 f. isolating, from step (e), peptide fragments which have apoptotic activity in cancer cells.